



# Tank-Automotive Research, Development, and Engineering Center

**TACOM-TARDEC**

Superior Technology for a Superior Army

**Mr. Jerry L. Chapin**  
**Director of TACOM-TARDEC**



# Outline

- TARDEC
- 21st Century Truck
- Enabling Technology and Collaborative Environments
- Technology Demonstration and Integration



# The Research, Development & Engineering Process



## PARTNERING

- with Industry
  - National Automotive Center
  - Crusader
  - Many Others
- with other Agencies & Services
  - DARPA
  - Marine Corps
  - Many Others
- with Allies
  - Future Scout Program (UK)
  - Munitions
- with Academia
  - UGV Competition

Concept Requirements & Functional Analysis

Concept & Analytical Studies

Invention

Application Formulation

Modeling & Simulation

TDs/ATDs/ACTDs

Technology Maturation

System & Technology Transition to PMs

Cooperative Research

System Engineering & Integration

Sustainment Tech. Support

Tech Data Mgt.

PM Support

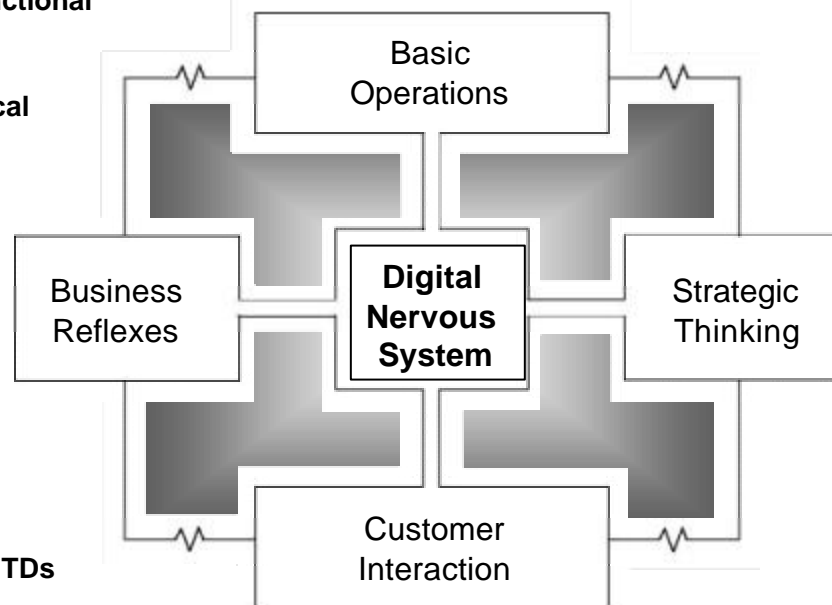
Quality Assurance

Value Engineering

O & S Cost Reduction

Technology Integration

System Requirements & Functional Analysis



*Committed to Excellence*



## ***Partnering as Daily Operations***

**Warfighters**

**Technology  
Demonstrations**

**Partnering With People**

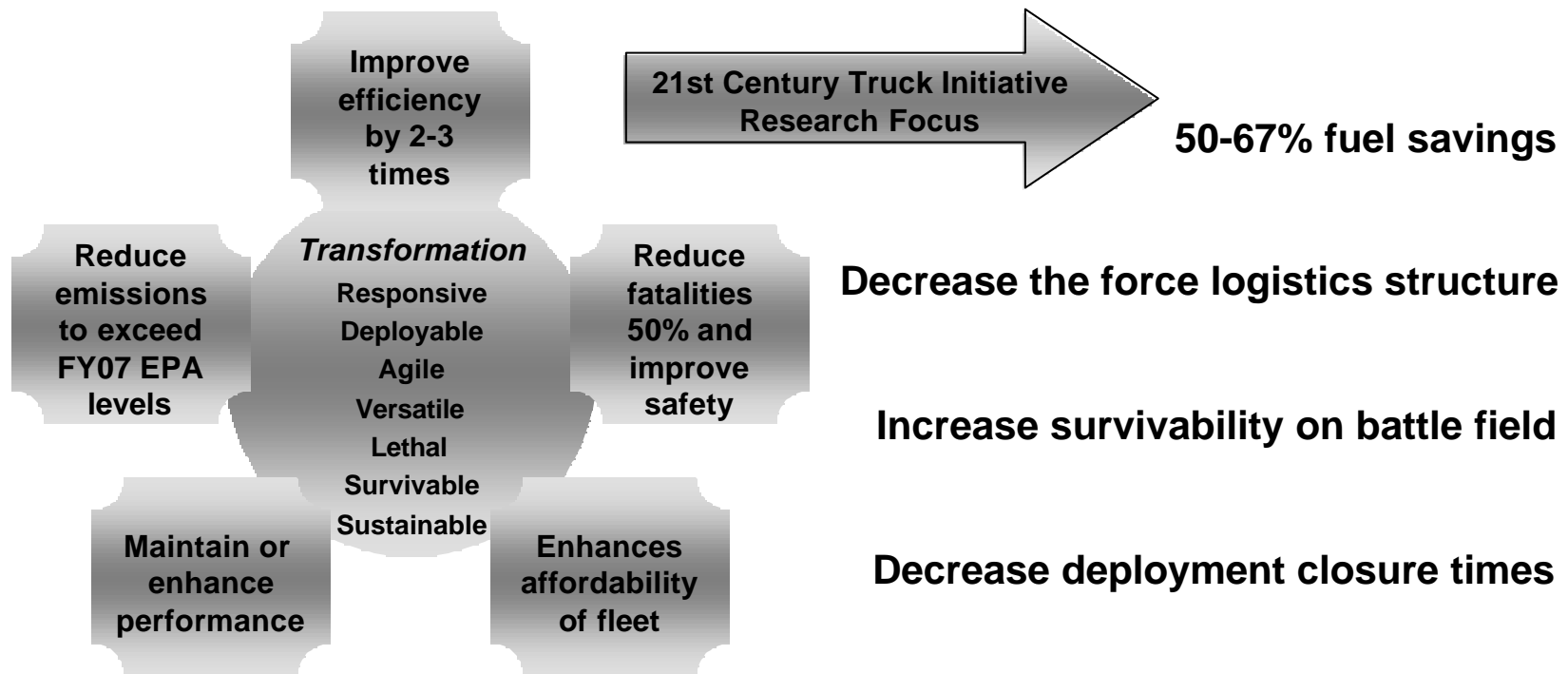
**Government  
Community**

**Research  
Community**

**Industry  
Community**



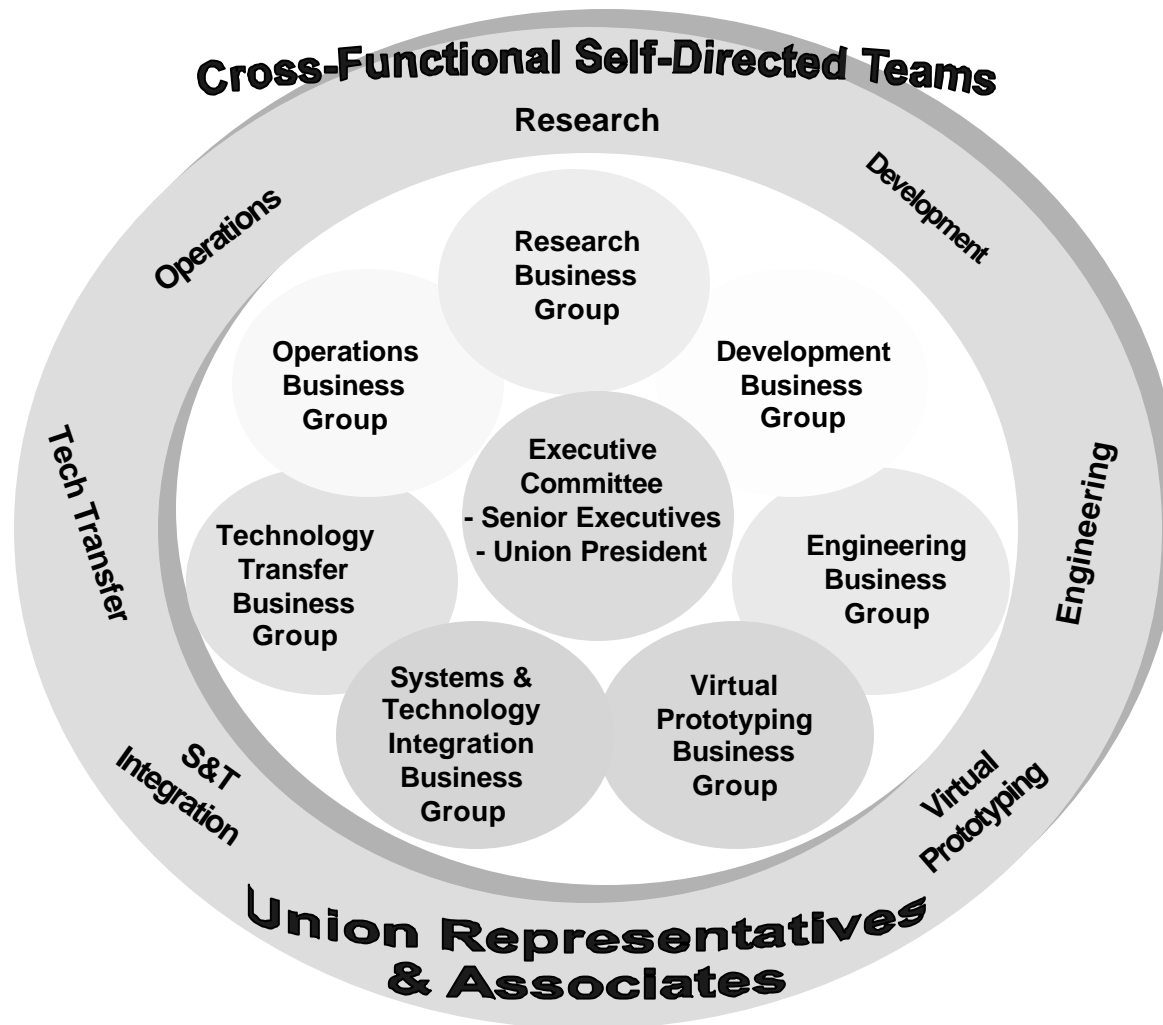
## ***21<sup>st</sup> Century Truck Initiative Goals Satisfy the Army's Needs***





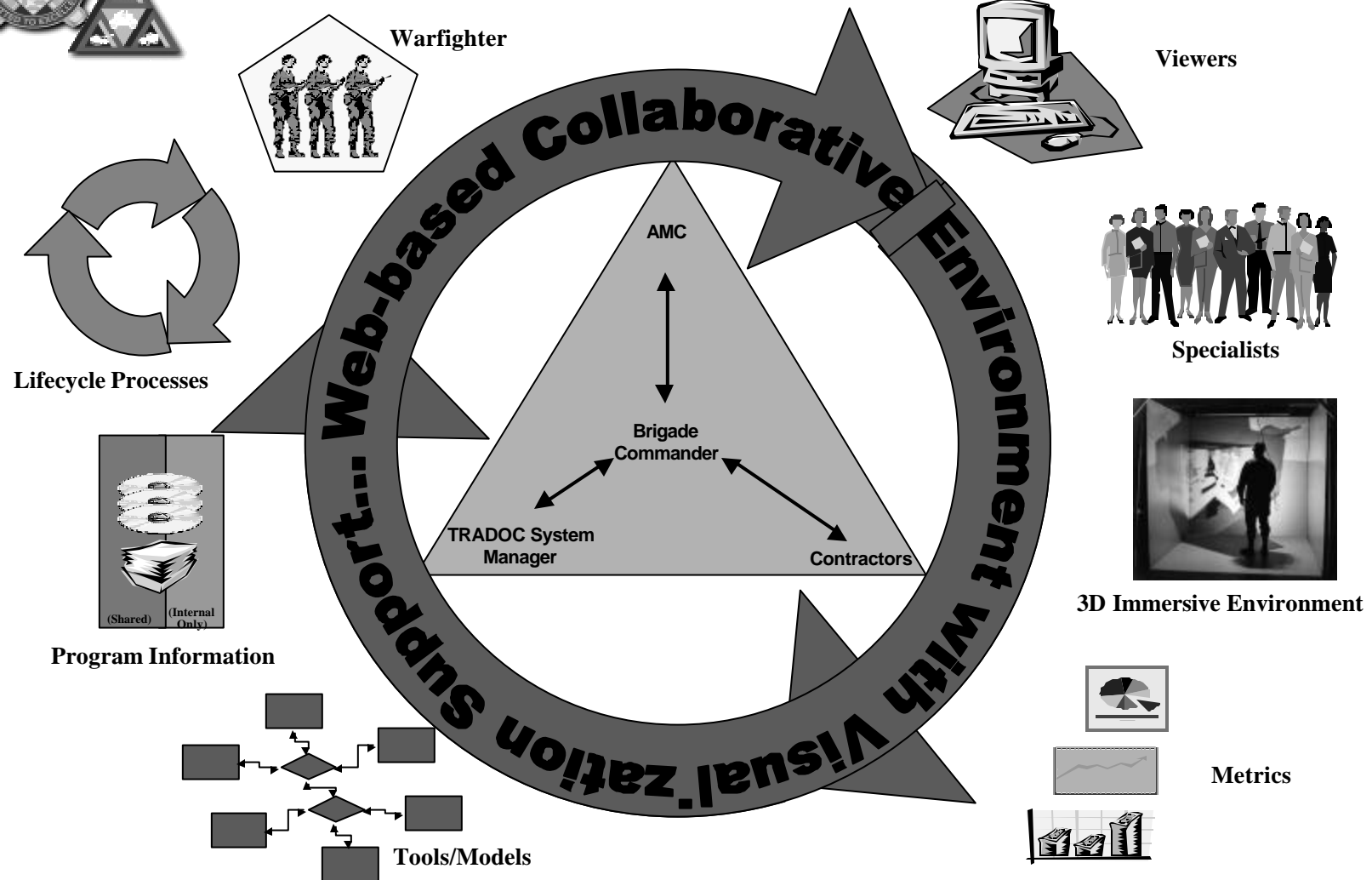
# TARDEC's Organization

## Cross-Functional Self-Directed Teams



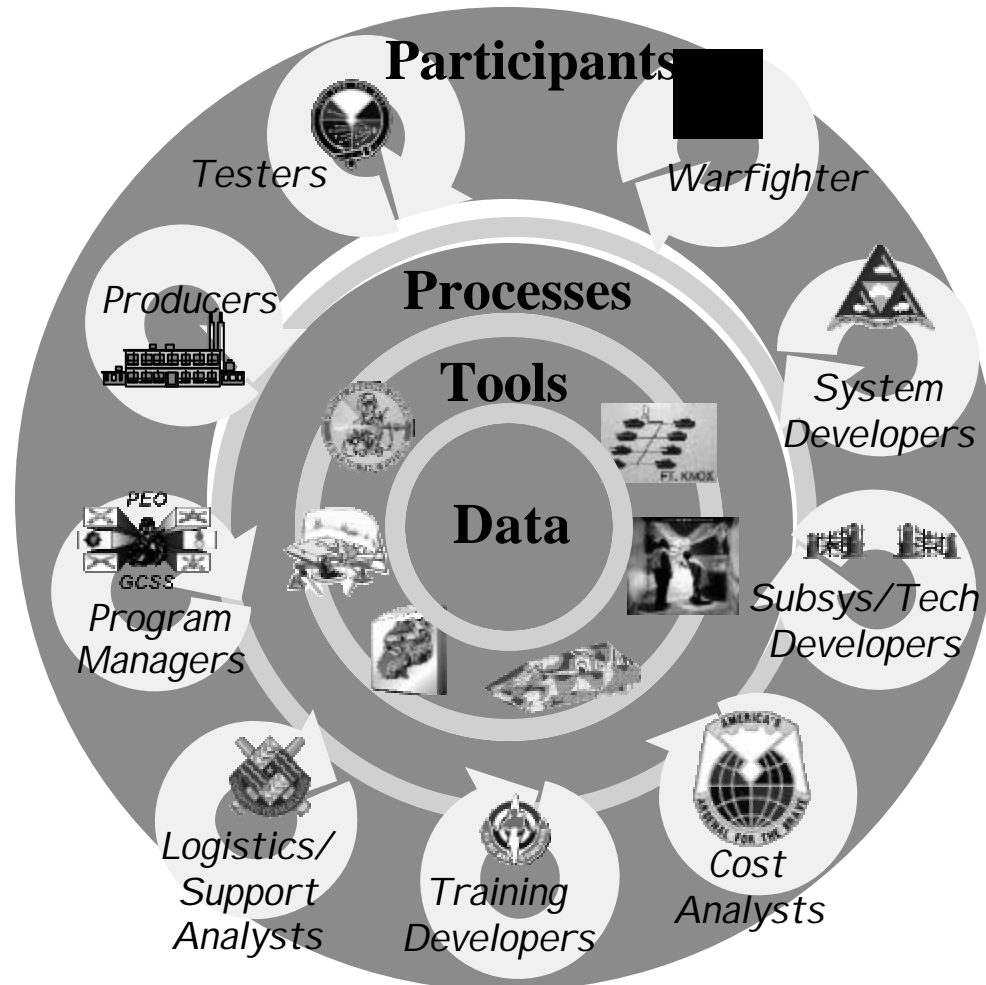


# Technology as the Enabler





# ***Collaborative Environment Definition and Framework***





# ***Electronic Collaborative Environments***

Army Vision –  
Distributed Virtual Collaborative  
Environments with On Demand  
Information



# ***Collaborative Engineering Environments***

3D Immersive Visuals  
Spatial Audio  
Haptic Gloves  
Data Control  
Voice Recognition

# ***TARDEC - Leader in Demonstrating Technology***

## **Demonstration of Technologies**



## **Integration of Technologies into Systems**



## ***Summary***

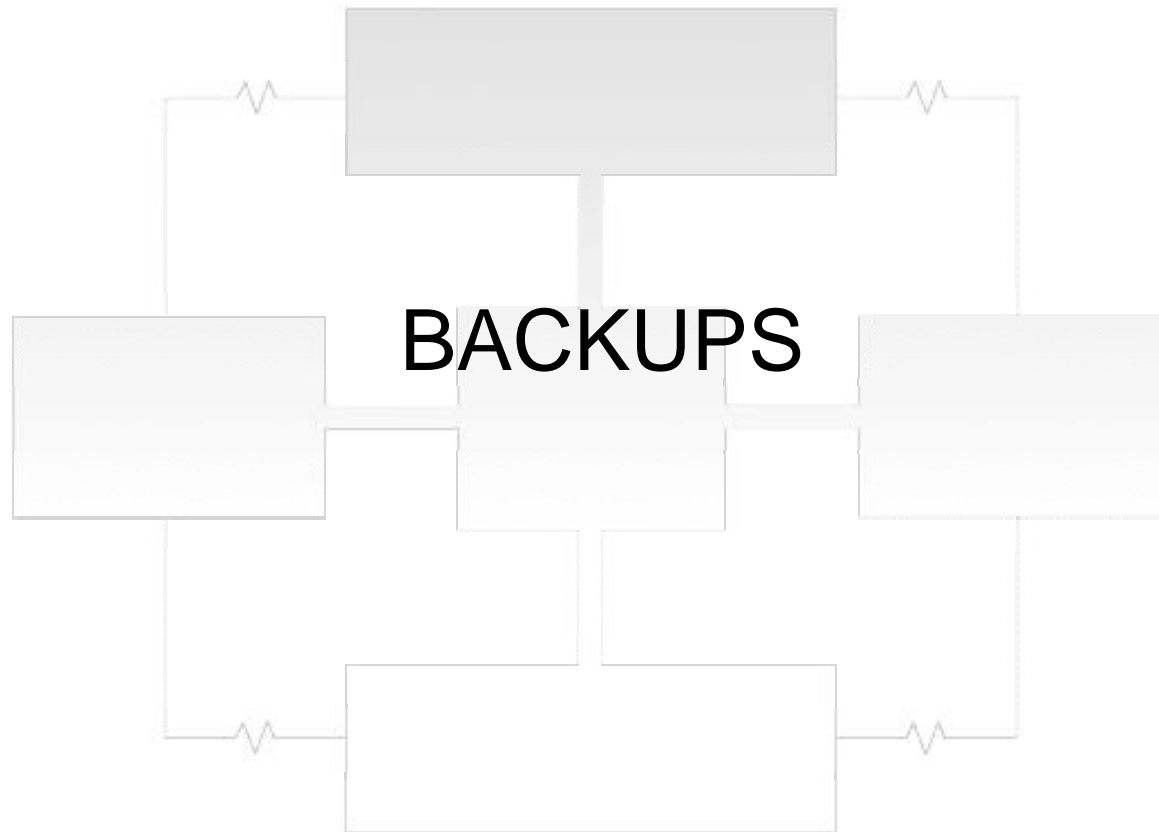
The technology and knowledge that allow collaborative environments exists.

These new environments enable us to demonstrate and integrate technologies better and demonstrate those technologies faster.



# **TACOM**

Lethality, Survivability, Mobility and Sustainment for America's Army



# 4 TWV R&D Opportunity Areas



*Combat Systems*



*Mechanical Countermine*



*Automotive Vehicles*



*Logistics Products*



*Water, Fuels & Lubricants*



*Bridging Products*